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कर्मणि व्यज्यते प्रज्ञा

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Doctrine of causality in Nyaya – Vaisesika

Dr. S. Sivakumar

There has been a great controversy over the question about the Doctrine of Causality in Indian Philosophy. A number of scholars have studied this problem from different points of view. The basic problem in the doctrine of causality is to define the cause and the effect. It is necessary to determine the relation between the two and to examine whether the cause contains the effect in its unmanifest form or the effect is an entirely new entity. The Universe is created from its primary cause. The question is whether the creation began from the primary cause upadanarabdha according to Nyaya-Vaisesika, or it is merely a samghata of the primary cause according to Buddha or an actual change of the primary cause according to Samkhya-Yoga or the illusory manifestation of the primary cause according to Advaita-Vedanta.

Primarily there are two different but equally important self-contradictory points of view related to the problem of causality. They are the 'Satkaryavada' of Samkhya-Yoga and the Asatkaryavada of Nyaya-Vaisesika, Madhvas and Purvamimansa. The Satkaryavada is further divided into two: The Parinamavada of

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Sankhya and the Vivartavada of Advaita Vedanta. In this context the concept of cause and effect as propounded in Indian Logic is very significant. A cause is that which, being antecedent to its effect is invariably concomitant with it and at the same time is not proved to be an accidental and unessential circumstance. The effect always follows the cause.

An effect is that which is produced and which necessarily follows such invariably concomitant condition which cannot be proved as an accidental and unessential circumstance. According to Annambhatta the effect is that which answers to its previous non-existence. An accidental circumstance is that without which the effect could be produced. It is of five kinds.

(i) Anything, the presence of which is necessarily apprehended with the real cause of an effect, i.e. whatever Dharma of cause pre-exists to an effect. For example, Stickness dandattva exists only with the stick danda, the instrumental cause of jar. Thus Stickness is an accidental circumstance for the production of a jar, bit is apprehended along with the stick which forms the real cause of Jar.

(ii) Whatever is not connected with direct positive – negative concomitance with the effect but only through the cause for

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example, the concomitance of the colour of the stick for the production of a Jar. The colour of the stick will have concomitance directly with the stick and indirectly through the stick with the jar. Hence dandarupa is an accidental circumstance.

(iii) Anything which, being invariably antecedent to a certain effect is also invariably antecedent to other effects, i.e. having determined the pre-existence of an entity (cause) towards a particular effect, the pre-existence is further determined towards other effects. For example, the pre-existence of ether Akasa is obviously determined as the cause of sound. It also pre-existence to the production of a jar. The presence of ether is an accidental circumstance to the production of jar. It is also an invariably essential condition of another effect, sound.

(iv) The cause of a cause is the forth kind of accidental circumstance. Example, the father of a potter. This category is based on indirect relation. The father of potter is also invariably antecedent to the production of jar as potter would not have been without the father.

(v) Anything which accidently becomes conjoined with such conditions as are found to be adequate to produce the effect

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by themselves. For instance, the accidental presence of an as at the time of the production of a jar or a piece of cloth. In fact, in the production of jar, the necessarily proceedings causes in all cases, the clay, the wheel of the potter, the rod and the potter himself, constitute the instrumental causes. An as does not become a necessary cause in spite of its being associated with the necessarily proceeding causes.

The Naiyayikas admit three kinds of cause

(i) Samavayikarama: the material or the intimate cause. Samavaya means an intimate or inseparable relation. The blue colour cannot be separated from the blue lotus. The Samvayikarana is that when the primary material is inseparably connected with the effect. Or, in which the effect is produced intimate relation. For example, potsherd is the Samvayikarana of a jar and threads of a cloth. Both the effects are in intimate relation with their respective causes. The effects are in the relation of conjunction with the loom, or potter's stick.

(ii) Asamavayikarana or the non-intimate cause is that which, being present in the Samavayikarana is a Karana. For example, the conjunction of threads towards the cloth. The conjunction,

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being a guna, is in intimate relation in gunin and is also in close proximity of Samavauikarana. Similarly, the colour.

(iii) In case the relation of causality between the effect and the cause is not accepted, any effect should be produced from any cause. On the other hand, our actual experience is that the material cause is a necessary requisition for the production of an effect. Hence the pre-existence of the effect in the cause.

(iv) According to Mimamsa, the effect does not exist, prior to its production in the cause. Mimamsa, propounds that the cause, possessed of a sakti, produces the effect due to its inherent faculty or power. Consequently, only from a sakta karana (possessed of sakti) the sakya karya is produced and not from the karanajatimatra. If the production of an effect from the karanajatimatra is accepted, then the sprout should be produced even from a fried grain. But this does not happen.

(v) The identity of the effect and the cause is real. The relation between the two is that of non-difference. When the cause is existent, the effect should also be so. It cannot be non-existent because it is simply a mode of the cause i.e. when the cause and the effect are of the same material, both must co-exist. One cannot be non-existing and other existing.

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In reality, the effect and the cause are different nomenclature of one and the same entity in different states. The manifest state is known as Karya and the unmanifest state Karana, hence the existence of the effect in the cause in the unmanifest from prior to its production. The objects are merely manifested by causal operation. At the final end of the causal function, the gross object assumes its original subtle form. The Samkhyas propound that whatever exists cannot be destroyed and whatever does not exist cannot produced. Otherwise, the horns of a hare, oil from the sand and son of a barren lady should also be produced.

The doctrine of parinamavada

The doctrine of Parinamavada belongs to Sankhya-Yoga and old Vedantins. The Parinama means modification or transformation or actual change, resulting in an effect having equal reality with the material cause. Or, production of an effect that has the same kind of existence as that of its material cause. The example of the transformation of milk into curds is often quoted. In this school of thought, there is entire modification of the substance, name and form of the cause of threads is indirectly the non-intimate cause of the colour of a piece of cloth for the colour of threads is in intimate relation in threads and in cloth with svasamavayisamavetattva relation.

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The tanturupa is Asamavayikarana towards Patarupa. The causality between the two appears to be wrong because of their being bhinnadhikaranattva. The patarupa being present in pata and tanturupa in tantu. For the sake of ekadhikaranattva, svasamavayisamaveta relation is accepted.

The Nimittakarana or the instrumental cause is that which, being different from both the above mentioned causes, helps to produce the effect. For example, the potter, the wheel, the stick are the instrumental causes of a jar because they are neither Samavayikarana nor Asamavayikarana but they do help to produce a jar.

The Asamavayikarana peculiarly belongs to Vaisesika System alone. The scholastics mention the term Samavayikarana as Upadanakarana. They further accept the doctrine of abhinnanimittopadanakarata.

The doctrine of Satkaryavada

The doctrine of Satkaryavada belongs to Sankhya system. The doctrine of causality is technically known as prakrtivikrtibhava in Sankhya-Yoga tradition. Prakrti is the cause and Vikrti is the effect. Regarding the relation of cause and effect, they hold that the effect exists in the cause prior to its actual production, in unmanifest or latent form. The non difference between the effect and the cause is

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real and the difference is unreal and imposed for the sake of Vyavahara. The reasons in support of this point of view are given below:

(i) A non-existent entity can never be produced. In case the effect is absent in the cause in reality, it could never be produced by the producer. For example, oil is produced from the seeds of sea mum where it pre-exists in unmanifest form, and not forms the sand because it is absent even in unmanifest form.

(ii) To produce a particular object, only a certain approach substance is required, e.g. who desires curds, will always take milk. Or, a piece of cloth could only be produced from threads. This is our common experience that the effect is always associated with its material cause, as the oil with the seed of seas mum. Otherwise, any effect should be produced from any cause. It is an admitted fact that every material could not be the cause of every effect. The fact proves the relationship of causality. Association with a non-existing entity is an absolute impossibility.

The change of the cause is real. The relation between the cause and the effect is that of difference and non-difference. The cause itself assumes the shape of the effect. In reality, both are real. The milk itself changes into curds, the effect not different from the cause.

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Thus the existence of the effect in the case in the form of the cause or the Sakti is accepted. It established the relation of difference-non-difference between the cause and the effect. It, further, becomes necessary to accept the reality of the effect, the universe, also. The Parinamavadin refutes the doctrine of Arambhavada of the logicians on the basis of the following three arguments:

(i) If we accept the absence of the effect in the cause, the oil should also be produced from the sand and lotus should blossom in the sky.

(ii) The potter, desirous to produce a jar, will not depend on its material cause, the potsherd.

(iii) The production of a positive existing object from mere absence or negation or non-existence is impossible. Accordingly, the effect exists in the cause in another from i.e. the unmanifest form of the effect in the cause. Creation simply means a new shape to a previously existing entity. The Universe also existed in its unmanifest form in its cause, Brahaman, when it became manifested.

The question of Parinama has been thoroughly dealt with in the Patanjalayogadarsana. It is stated that Parinama is the

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disappearance of the old dharma and appearance of the new Dharma in the same Dharmin. The transformation is of three kinds:

(i) Dharmaaparinama is the transformation of external aspect. In this kind of parinama, the dharmin remains the same, simply the dharma abandons its old form and assumes a new one. For example, the clay leaves its old shape of ball and accepts the shape of a jar.

(ii) Laksanaparinama is the transformation in relation to Laksana. It is a synonym of Kalaparinama. It concerns the evolution of prakrti. In Samkhya-Yoga, every Parinama has to be from unmanifest to manifest and to retire into unmanifest. The grammatical tenses correspond to this Parinama. Laksana is not ultimate. It is an Avastha. Each Avastha is ultimate and momentry. The evolution of prakrti is series of successive moments. Everything passes from future through present into past. The future and the past simply stand for unmanifest Prakrti. Thus Laksanaparinama is nothing but to be related with past, present and future.

(iii) Avasthaparinama is the transformation of the intensity, such as the change in childhood, youth and old age.

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In the strict sense, all these three Parinamas respective a single change. Dharma is not different from dharma. Simply the Vikara of Dharmin is known by the term Dharma. The Vikararupa Dharma, being present in Dharmin, changes, and the substance does not change. Hence Dharmaparinama, since all transformations are in the Dharmin.

The doctrine of vivartavada

The parinamavad is two fold:

(i) Pradhanaparinamavada of Samkhya-Yoga and Caraka.

(ii) Brahmaparinamavada of old Vedantins like Bhartrprapanca and Vallabha.

Vedantin rejects the doctrine of Sankyavada of Samkhya-Yoga and Asatkaryavada of Nyaya-Vaisesika. There appears to be some truth in both these doctrines. The existence and the non-existence of the effect in the cause appear to be real. Both these, being self-contradictory, give rise to the doctrine of Vivartavada.

The doctrine of Vivartavada is upheld by the adherents of Sankara Vedanta, Vijnanavada and Sunyavada.

Vivarta means apparent change or illusory manifestation or transfiguration, resulting in an effect whose reality is not equal to that of the material cause. Or, the production of an effect that has a different kind of existence from that of its material cause. It is neither real nor

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unreal like that of gold into ornament. In Vivartavada, there is apparent modification of the cause in name and form only but the substance does not change. In fact, it is misapprehension or illusion such as in case of rope mistaken for a snake, or an oyster-shell mistaken for silver.

The change of the cause is not real. The illusory silver is simply transformation in relation to nescience and transfiguration in relation to consciousness. Likewise, when we mistake Brahman as universe, Brahman has a real existence while Universe has only an unreal existence. It is Brahman on which universe is impose. It is further, noteworthy that the appearance of Brahman as Universe is not even transfiguration but simply figuration. It is the appearance of the formless as having form. In fact, there is change of external aspect only. The change of state means a certain arrangement of the parts such as a plate for gold or a substance assumes a particular shape and name but in reality the substance gold does not actually change.

The Vaishnavas admit the Brahmakaranavada or the Brahmasaktikaranavada. The Universe exists in Brahman in unmanifest form or identical form or in the form of potency because it becomes manifested as before. In this, view, the relation between universe and Brahman is that of difference non-difference such as in case of gold and ornaments.

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In Vedanta, the production of silver in an oyster-shell is mere apprehension and not real. The locus is apparently real while the imposition of silver is unreal.

The doctrine of Origination

The doctrine of origination pertains to the followers of Nyaya-Vaisesika and Madhva-Vedanta. Accordingly, the creation of Universe has it beginning from its primary cause. All the three types of cause viz. Samavayi. Asamavayi and Nimitta jointly produce an effect, different from the cause. The various schools of Indian Philosophy admit that the effect is different from Asamavayi and Nimitta but the difference of the effect from Samavayikarana is accepted only by Naiyayikas and Vaisesika.

Thus, a piece of a cloth produced from the threads is quite different in form from the group of thread. In Arambhavada, Samavayikarana produces the effect as different from itself. At the same time Naiyayikas and Vaisesikas, having established the duality of the cause and effect, admit the eternal relation between the two.

Naiyayikas hold that the existence of the effect in the cause prior to the production of the effect is impossible. In fact, the jar etc. previously non-existing objects, are produced in the potsherd, the cause or causal material. The effect is entirely different from the material

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cause. A piece of cloth is simply a collection of threads but it is entirely different from the collection of threads by which it is produced; hence the absence of effect prior to the function of the cause. The cause and effect are both real and different from each other.

The doctrine of origination is based on the atomic theory of creation. Accordingly, the combination of the infinite number of atoms results in the formation of gross physical elements. They maintain that these subtle atoms have to beginning, end and change. The change is simply in relation to the qualities and attributes. Similarly, they admit an infinite number of conscious elements which do not have a beginning, end and change.

The relation between the gross world and material cause is that of intimate one, while with the subtle conscious cause, it is that of conjunction. Thus in Nyaya-Vaisesika the cause does not actually change and the non-existent effect which is produced lasts for a certain period of time.

Naiyayikas further argue against the standpoints of Vedantins stating that when universe already existed in its cause i.e. Brahman, in unmanifest form, the meaning of the word janma in janmadyasya yatah will either be useless or limited. In accepting the Vedanta outlook, the causal relation between jagat and Brahman could not be

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established because the unmanifest Jagat will be the cause of the manifest Jagat and not Brahman and also that the causality between the jagat and Brahman will be refuted.

The question of creation is always related to that object only which does not already exist. The idea of creating an existing object involves the defect siddha-sadhana. As such non-existence of son in the body of the parents prior to his birth; hence the production of non-existent; for example, the production of a jar from its previous absence.

Naiyayikas also refute the doctrine of Parinamavada on the arguments given below:

(i) If the existence of the effect in the cause is accepted, everybody should be able to have its perception. The Parinamavadin should be able to show the huge Indian fig-tree existing in an unmanifest form in the seed with the help of a microscope. One does not perceive a piece of cloth in the threads; hence non-existence of the effect in the cause.

(ii) To accepts manifest of an unmanifest will involve the defect of Svarupahani.

In this way, Naiyayikas propounded the doctrine of Asakaryavada i.e. the non-existence of the effect in the cause. Creation does not mean another shape or state. From a non-existing

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effect in the cause, an existing effect is produced. The Brahman is sat but Universe in Brahman is Asat. The universe is created from Asat.

Conclusion

The Naiyayikas admit absolute difference between the effect and the cause. The non-difference between the effect and the cause is impossible.

- Both the self contradictory states of effect and cause could not be present in one entity simultaneously.
- To accept the identification between cause and effect, one has also to accept the non-difference of the object and activity. Now the water could be brought in the clay as Abhedavadin admits the identity between the jar and clay. Besides, a jar will be produced from a jar. To a logician, jar is an entirely different entity from its cause; it is known as Arthakriyabheda.
- It is our common experience that the cause is invariably antecedent to the effect and as such both are absolutely different.
- To the Logician the cause and the effect are two concepts, brought together by the relation of causality. The effect is intimately related to its materials cause by nature.

Thus the realistic doctrine of origination propounded by Nyaya-Vaisesika could be tacitly accepted.

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The Impact of learning styles in virtual learning environment

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Abstract

The objective of this study is to make a review on learning styles in Virtual Learning Environments (VLE). VLE has to be clear and functional to obtain good learning results. If there are multiple courses in VLE their appearance should be unified in purpose to get simple and easy access to course information and learning materials. The VLE can be used in many more ways than just learning. They can serve as storage for different kinds of information. The VLEs are successful in e-learning but take learning styles poorly into consideration. To make the VLE adaptive for different learning styles, learners' behavior in learning environments has to be studied. The challenge is to get enough information to process. With the obtained data, student models can be created and thereby find the students' learning preferences. By including multiple learning objects that serve all kinds of learning styles the VLE can be developed to be adaptive for learners' needs. It is important to focus on students' awareness of learning styles.

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Keyword

Learning style preference, e-learning, virtual learning environment, web base learning class.

Introduction

Learning is a complex process where students' motivation, teacher, learning material and several other aspects interact with each other. Now-a-days the traditional classroom teaching has changed more and more into a virtual environment where different issues about learning has to be taken into account. The basic learning concepts remain the same wherever the studying place is. The students have to be motivated in the learning situation and the material has to be easily at hand. Leaning has dramatically changed over recent decades when technical revolution has brought different opportunities to learn via the Internet (Lahtinen 1997). Constructivist learning theory is now-a-days "the theory" in learning. It emphasizes the learners' experiences in the learning process. Despite that, the studying is still very teacher centered also in the academic level with traditional lessons and practices. This makes students passive. The impression on teaching has changed from teacher-centered to student-centered learning. There the student's role as active learner is emphasized. The learning results depend on students and teacher's activeness and interest in the

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subject. Student's activeness in the learning process can be activated with alternative learning methods such as group works, discussions and questionnaires (Korhonen 2004; Verkkotutor 2005).

People differ from each other in the way they prefer to learn. Some like to read things whereas others want to listen. Whatever the best way is it changes between situations and people use multiple learning styles. People differ from each other in learning styles but also in other areas incorporating learning. Some of these areas are motivation, self confidence and learning speed.

Need for the study

E-learning has already influenced the field of teaching, training and development. A growing number of college courses are delivered over the web and are increasing student numbers (Chang, 2001). Many directors of corporate training believe that web-based learning is the future method for their training programs (Barron, 1999). However, the field lacks enough documentation to show that e-learning is an effective delivery mechanism in relation to the individuals being taught. For example, research on learning styles has consistently shown that considering personality attribute in preparing and delivering instruction can significantly improve the learning process (Dwyer, 1998).

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Aroyo and Dicheva (2004) indicate that many researchers in the area of education systems are concerned with moving their research to a coherent space of collaborative intelligence from scattered intelligent. There are only a few practical studies that have investigated the effect of this methodology on student knowledge when considering learner's learning styles. Researchers empirically investigated the impact of e-learning on student knowledge based on learning styles. In addition, there is evidence that e-learning is more effective for those with a particular learning style. Results were compared with the traditional instructor-led course format. The outcomes should help instructors and instructional designers to develop more efficient and effective instructional methods based on student learning styles. Furthermore, it could help training and learning centres look for efficient and effective methods to keep up with the ever-growing need to upgrade the skills of their workforce based on their learning styles.

Learning

General aspects on learning

Learning is a process where a human absorbs information, memorizes and processes it for further use. There are many things and skills that we learn unconsciously or without further thinking for example riding a bike. But there are also lots of things that we learn

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consciously and use different strategies to learn it (Verkko-tutor 2005). These strategies we usually use by doing what feels good and right and how we learn best. One can write notes about European history and then memorize them when others prefer to watch a documentary about it memorizing the same learned things.

There is no right way to learn in a specific situation. Everyone has his/her own style on learning which can also vary from one situation to another. Because of the variety of learning theories and styles, one can choose flexibly different strategies and styles in situations so as to use the most efficient one. The better one is aware of his own learning style, the better he can use them to his advantage in learning (Verkko-tutor 2005). People learn differently and there is said to be dissimilar learners. This dissimilarity is due to the fact that learners prefer different learning styles, have different learning motivation and differ from each other in self confidence (Vainionpaa 2006).

Leaning has been very teacher centrered in the past centuries. Bransford, Brown and Cocking (2000) emphasize the meaning of leraner-centered instruction. Student centered learning doesn't mean giving up teaching all together, but using preconception as a basis when students are consciously and systematically guided towards profound knowing.

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Bransford considered learner centered instruction in respect of three essential principals with whom learning environments should be developed. The first principal was information centricity which means emphasizing students' thoughts and ideas and the substance-what is taught and why. The second principal was evaluation-centricity where formative evaluation is used to utilize the feedback during the learning process.

Students' self evaluations have a very important role in this principal. The last principal community centricity guides to break the boundaries of the learning environment and make connections with other communities and specialists (Bransford et.al. 2000).

Leaning theories

Leaning theories and styles observe and define learning with different ways. Leaning theory gives a theoretical model of a human's learning process. There are two main theories which have had an impact on learning studies over time. Before the 1960's behaviourism was the leading learning theory. Since then, the constructivist learning theory has influenced most (Verkko tutor 2005). The basic idea of behaviourism is that a person learns when reacting to a stimulus. It is a learning concept where learning is defined as a change in behavior (Oppimiskeskus 2006). Teacher's activity and the learning material itself have been

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emphasized. Behaviourism has had a great impact on teaching in those days. The essential principles of this learning technology are systematic preplanning, strict definition of the learning goals and the evaluation of learning in relation to the goals (Salovaara 2004).

Constructivism is based on cognitive psychology which examines man's inner processes like thinking, memory et cetera. In the constructivist learning process the learner constructs information through his own experiences, chooses and interprets it and analyses it with his former knowledge. The learning is self regulating and learner centered. The constructivist principles can be used especially in distance and independent learning.

Learning environments are based on constructivist thinking (Verkko tutor 2005). The basic idea behind humanistic psychology is the aspiration to holistic research on individuals. It emphasizes human's creativeness and mental growth. Humanistic psychology has had its impact on learning through empiric learning. It has been used especially in adult education. The humanistic view on learning emphasizes the importance on the learner's experiences. Although the experiences alone are not enough if they are not processed consciously (Verkko tutor 2005).

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E-learning

E-learning refers to using electronic applications and processes to learn. E-learning applications and process include web based learning, computer based learning, virtual class rooms and digital collaborations. Content is delivered via the internet, intranet, extranet, satellite TV, and CD-ROM with multimedia capabilities (ISP, 2004). E-learning is defined as individualized instruction delivered over public (internet) or private (intranet) computer networks. E-learning is also referred to as online learning, web based learning (WBL) and the virtual classroom. E-learning was first called 'internet based training' then 'web based training'. Today you will still find these terms being used, along with variations of e-learning (Jugon).

Distance learning

Distance learning is learning where students and instructor (teacher) are not in the same place but are in contact with each other though some form of media. There are basically four different generations in distance learning. Already in the 19th century there were distance education and learning as a concept of correspondence education via letters. It had several problems including slowness of feedback and lack of interaction (Immonen 2000).

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In the second generation means of communication were taken into use. Picture and sound came into the learning process through television and radio. The problem in this phase was that the used media was just a distribution channel where students were just passive listeners. The strengths of these medias could be used as a part of distance learning together with other medias (ibid).

The problem in the second generation was solved with the third generation's communication technology. It enabled the wanted interaction through phone, email and video conversations. Now-a-days we are living in the fourth generation with the online learning concept where information technology is used. The combination of information networks and multimedia has led to generating the term Virtual Learning Environment (VLE) (ibid).

Strengths and weakness on online (distance) learning one strength of online learning is that the students can access the e-learning material anywhere, anytime and at any space they want. Space commitment is not relevant and students can freely study whenever they have time. The co-ordinator of an e-course can be for example in Finland and the participants all around the world. Everything needed to study is on the Internet and the material and other participants of the course can be accessed via the web.

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When studying online, resources and ideas are shared between students themselves and between students and instructor. This dynamic interaction is one of the greatest traits in e-learning. High quality dialog can be attained using asynchronous discussion structures (for example forums), because participants have more time to consider their responses than in the face to face conversation. Interactivity is often self evidently connected to working on the net. To bring about target oriented collaborative learning is a major issue in online learning. It is a problematic issue and hard to realize and therefore an essential problem in online learning. What would be the key to reciprocal learning process? The way the students see learning should change so that other students are seen also as a source of information and comprehension (Illinois Strength and Weaknesses 2006).

Learning styles

Individual learning styles differ, and these individual differences become even more important in the area of education. Therefore, the real challenge in e-learning is keeping the people it is designed for in mind (Canavan, 2004). Learning style is defined as an individual's inherited foundation, particular past life experience and the demands of the present environment that emphasize some learning abilities over others (Kolb, Rubin and McIntyre, 1974). Educators should be aware of how people

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obtin and preserve skills and how they access information to help their prcgress. Hiltz (1993) indicates that a primary goal in studying a new meium of communication for educational delivery must be the idetification of its impact on learning. Students may benefit from undrstanding their own learning style by taking measures to adjust the waythey acquire knowledge (Cowley et.al., 2002). While instructors canot always accommodate each student's need, it is important that seveal learning opportunities are provided (Tu and McIsaac, 2002). It is expected that when the learning experience is more effective for the studnt, an increased level of user acceptance of information systems will esult. Researchers believe that learning style is a good predictor of an inlividual's preferred learning behavior (Bostrom, Olfman and Sein, 1993). Lindsay (1999) found that a match between learning style and teaching style reveals increases in student achievement and satisfaction. Contrary to these finding, Hajizainuddin (1999) found no significant relationship between the information processing characteristics of learning styleand performance. In addition, he found no significant interaction among the factors of learning style, hypermedia's organizational structure and attitude. Desai (1996) indicated that learning style does not significantly influence a subject's learning.

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While there is plenty of study done on learning styles, there does not seem to be any agreement or approval of anyone theory (Bruen and Conlan, 2002). Furthermore, not all researchers and writers agree with learning style models. A research report from the learning and Skills Research Center (Coffield et.al., 2004) studied many influential learning style models and did a critique of all experimental learning style theories. This research questions the reliability, validity and implication of learning styles in general.

In addition, the authors have criticized some of the research that has used these models including the Kolb's learning style model and disagreed with the way they came to their conclusions. According to the paper, Kolb's Learning Style Inventory (LSI) in general 'should not be used for individual selection'. Referring to the validity and reliability of LSI the paper indicated that 'the construct validity of the LSI has been challenged and there is a long public dispute over reliability of LSI'. Furthermore, the paper indicated that, there is no proof that 'matching' increase educational performance in future education and that the findings are inconsistent and questionable. Markham (2004) points out that the research on learning style has to go further than the simplistic effort to show that people differ on a measure and that these differences lead to a definable learning outcome.

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Leading Style Models

There are many different kinds of learning style models based on different aspects. One model concentrates on human observation channels; vision, hearing and feeling. It is called the Visual Auditory Kinesthetic (VAK) model. Probably the most well known model is the Kolb's learning style model. Kolb's learning style model David Kolb developed his learning style model over years basing it on the research on many others, for example Rogers, Jung and Piaget. He published in a book 'Experiential Learning: Experience as the Source of Learning and Development' in 1984. Kolb's experiential learning theory (ELT), and Kolb's learning styles inventory (LSI) (Business balls). Kolb's learning theory includes different learning styles, which are based on a four stage learning cycle. The learning cycle stages are:

- Concrete Experience (CE) – Feeling
- Reflective Observation (RO) – watching
- Abstract Conceptualization (AC) – thinking
- Active Experimentation (AE) – doing

Kolb says that concrete experiences lead to observations and reflections. These reflections are absorbed and translated into abstract concepts with implications for action, which a person can

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actively test and experiment. This enables creation of new experiences and starts a new cycle.

Ideally this process represents a learning cycle where all the bases on learning; experiencing, reflecting, thinking and acting are treated (Business balls). The learning styles definitions are representations of the combination of two preferred styles.

- Diverging (CE/RO)
- Assimilating (AC/RO)
- Converging (AC/AE)
- Accommodation (CE/AE) (Business balls)

The diverging learning style is learning through feeling and watching. The word diverge means break up or differ from something (English – Finnish General Dictionary 1997). These people prefer to watch rather than do. They are best at viewing concrete situations from several different viewpoints. They prefer working in groups, receive personal feedback, gather information and use imagination to solve problems (Smith 2001). The assimilating leaning style combines watching and thinking as ways to learn. The word, assimilate, means absorbing and translating (English-Finnish General Dictionary 1997). This can mean that the assimilators prefer clear explanations rather than practical opportunity. For assimilators ideas and concepts

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are more important than people. They want clear explanations and tend to like logically sounding theories over ones that are based on practical value. These kinds of learners prefer readings, lectures and exploring analytical models (Smith 2001).

The converging learning style is learning by doing and thinking. The word converge means to get closer to something (English-Finnish General Dictionary 1997). It can be seen as the convergers like to combine ideas and practice closer together. People with 18 converging learning style like to find out solutions for practical issues. They prefer technical tasks, and are less concerned with people and social or interpersonal issues. Convergers like to experiment with new ideas, to simulate and to work with practical applications (Smith 2001).

The accommodating learning style combines doing and feeling as ways to learn. The word accommodation means adaptability (English-Finnish General Dictionary 1997) which can mean that the accommodators like to adapt the learned things into practice.

Learners who prefer accommodating learning style like to do things concretely. The accommodating learning style relies on intuition rather than logic. These learners take a practical and experiential approach to learned material. They prefer to work in teams to complete tasks (Smith 2001).

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Honey and Mumford's learning style model

A learning style model developed by Honey and Mumford in 1982 is based on Kolb's work but is somewhat different. It includes four key stages of learning styles:

- Activist
- Reflector
- Theorist and
- Pragmatist

They are often presented as the Kolb's learning styles although they differ a little. Activists enjoy new ideas and tasks and like to be very active in the learning process. Activists learn best when they are involved in new experiences, problems and opportunities. They like to work in groups, work with tasks and educational games. Listening to lectures or reading and writing on their own, hinder the activists learning. They don't like to follow precise instruction or strict schedules (Campaign for Learning 2006).

Reflectors are more drawn back than the activist. They prefer standing aside and think what is happening. They learn best by observing someone else, collecting information about it and going through what was learned. They like to produce analyses and reports.

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Reflector don't like to be leaders or do things unprepared and with tight deadlines (ibid).

Theorists prefer analytical and rational thinking over subjectivity and emotions. They like complex problems where they can use their skills and knowledge. Structured situations, interesting ideas and concepts are things which theorists like in the learning process. Theorists learn less in situations where emotions are emphasized or activity is unstructured or briefing is poor (ibid).

Pragmatists are the ones who prefer hands on doing over theory. They like that learning tasks are related to their present or future job. Pragmatists are down to earth who learn less when there is no benefit to achieve or no guidelines to do the job (ibid) 19.

The Honey and Mumford learning style stages and the Kolb's learning styles are very similar. Here is correspondence between them:

Activists = Accommodating

Reflector = Diverging

Theorist = Assimilating

Pragmatist = Converging (Business balls)

Web course

A course can be text based or have computer mediated enhancements or is fully designed for web setting (Caplan 2004).

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General tasks and objectives for teaching are defined in Fleming's (1987) topology. It divides them into six categories: attention, perception and recall, organization and sequencing, instruction and feedback, learning participation, higher order thinking and concept formation (Fahy 2004).

It is important that the course forms a clear and compact ensemble and the format of the course is clear, easy on the eye and also esthetic. Clear instructions make it easier for students to obey them. A quality web course attracts discussion and the discussion area is functional. This way interaction between students can be achieved. Of course communication between student and teacher is important and web course should also provide that aspect. Picture and audio material should be at hand and have enough links to resources.

There are also some characteristics related to the student and the studying. The student is motivated as well as possible and student's learning style is supported (text, audio, video). The teacher should be motivating and supporting and the learning environment should be clear, interesting, functional and easy to use. It is also important that teaching aids are suitable for the course and the learning material is up to date and of good quality. One criterion is that the course is easily available to students, regardless of time (Nevgi & Tirri 2003).

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Virtual curriculum on the Internet web based learning offers a variety of choices to use technology not only inside one university or even one country but also between other countries all over the world. It gives a great opportunity to bring and share information and knowledge. The courses include e-books, videos, slide shows, exercises, and web exam.

Needs in e-learning Recommended e-learning activity

Activist interaction between other students, free form exploration and observation, no strict schedules. Group works, experimental problem solving, real time conversation. Reflector organized studying methods, well outlined lectures, systematic instructions. E-books, forum conversations.

Theorist learners like traditional learning and clearly defined goals. They are recommended by logical cause effect assignments and quizzes during the course. For pragmatists practical exercise and real time discussions are recommended in e-learning because they like practical issues.

Conclusions

The results revealed that learner learning styles were statistically significant for knowledge performance. This conclusion is consistent with earlier findings on the important of learning style. For the instructor

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based learning class (traditional), the learning style was irrelevant, but for the web based learning class (e-learning), learning style was significantly important. The results showed that students with learning styles Assimilator (these learn best through lecture, papers and analogies) and Converger (these learn best through laboratories, field work and observations) did better with the e-learning method. This mean that those learners that like to learn through thinking and watching and thinking and doing would learn better with e-learning. In addition, students with learning styles Accommodator (these learn best through simulations and case study) and Diverger (these learn best through brainstorming and logs) received better results with traditional instructor based learning. In other words, with the Assimilator and Converger learning styles there was a slight increase in score performance as the method of delivery changed. Staff in charge of curriculum development, and corporate leaders, will have to motivate their learners to use e-learning as a formal learning and training tool. The result of this study could be of specific interest in educational foundations and training institutes; in particular those that want to transfer some of their conventional courses onto the web.

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SOURCE CRITICISM

Dr.G. Sajina

Source criticism or source study is a literary term related with the higher criticism of ancient manuscripts. The term Higher criticism is related with textual criticism, which is otherwise known as lower criticism. Without explaining lower criticism we cannot explain higher criticism and source criticism.

Textual criticism is the basic study of an ancient text .It is a branch of literary criticism .It is the process of identifying the author's text or the text nearest to author's text from the available copies of an Autograph.

The textual critic's job is to re construct the original text. For this purpose a textual critic uses internal evidences. In this process he retains all the variants he found during the process within the edition for further studies. Retaining the variants reveals the honesty of the text and the critic. Though the lower level study of an ancient work is called textual criticism, its higher level is called highercritaicism.In higher criticism the critic investigates the origin of a particular text .Higher criticism is otherwise known as Biblical criticism. The history of higher criticism gave the name Biblical Criticism. Higher criticism originates in The German School of Biblical studies in the late 18th and 19th century.

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Its origin is closely related to rationalism and naturalism. The higher criticism methods and concepts spread all over Europe from Germany. Higher criticism first applied in the study of the Bible. Hence it is called Biblical criticism. Though higher criticism tries to reveal the historical origins such as the time, place, in which the text was written, its sources, the events ,dates ,persons, places, things and customs that are mentioned in the text, it is known as Historical criticism.

According to the methods, higher criticism is divided into five categories .i.e., source criticism, form criticism, redaction criticism, tradition criticism and radical criticism.

Source criticism is defined as the process of identifying potential sources and precursors of the text we have now. The famous Pentateuch division between source J and E of the Bible is an example of source criticism. These two sources are distinguished by the terms of Yahweh and Elohin. Later two additional sources P (Priestly) and d (deuteronomic) are introduced. This is known as the JEDP theory. Famous German scholar of 19th century Julius Wellhausen introduced this theory.

The area of source criticism shows how we can analyse the particular available source in the higher criticism of an ancient text. The main area of source study is related with religious books such as The Bible, The Mahabharata etc. In addition to that source

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study is relevant in the case of ancient literature written on manuscripts. As the pat of Indological studies and critical editions, study and criticism of sources took place but in most cases it will not be revealed or it exists as the preface of the edition .It is very essential to publish these studies and present before the academicians and scholars.

Let us look into the source study of ancient literary texts. The copies of ancient literary manuscripts are lesser in number comparing to religious books. The availability of the number of the copies are according to the importance of that work. So the scope of source study is different from that of the religious texts. The main problem in the case of literary text is the unknown author, place and the period of the work. Most of the ancient authors were reluctant to reveal their identity. In such cases a textual critic has to take in account of the internal and external sources. The internal sources are the evidences within the manuscripts and the external sources are the evidences we get from other books such as history of literature ,books of contemporary authors, people's beliefs etc.

Critical Edition and Study of Bhagavatham Irupathinalu vruttam is an example for source study. It is a Hymn Having twenty four "vruthas" (chapters), dealing with the stories of Sreekrishna based on the holly book Bhagavatha.Six manuscripts and so many printed

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texts of the book are available. I took all the available manuscript and the most ancient printed text for my study. There were no clear evidences about the author, place and the period of the work. The Only dates available from the manuscripts are the date of copying of source A and source B manuscripts and the first one is of a copy of 18th century AT the time of higher criticism the sources o are sorted into two major categories the external sources
and the Internal sources.

INTERNAL SOURCES

1. The images used in the work.
2. Mentions of a God who is sitting on the Anantha naaga.
3. The ideas, humour, sarcasm, metres, metaphor etc.

EXTERNAL SOURCES

1. Beliefs of old generation.
2. Mentions about the author as Kunchan Nambiyar.
3. Mentions about the author other than Nambiyar.
4. The doubts of the scholars about the author.
5. The resemblances with Rammayanam Irupathinalu Vrutham.

By the analysis of both internal and external sources on the basis of clear evidences and logic and with the help of a stylistic study I came in to the conclusion that the author of the text is

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Kunchan Nambiyar the versatile poet of the 18th century and the work is one of his earliest creations. An effective way to solve the problems about the ancient literature is to analyse the sources using the methodology of higher criticism. It helps to give literary critics and other interested people a very useful data for their further studies.

THE SCOPE OF SOURCE STUDY IN PRINTED TEXTS

Inorder to the higher criticism of the ancient manuscripts, source study is relevant to the study of printed texts also.Considering two recent studies about two important books of Malayalam Language And Literature we can analyse the scope of source study in printed books. The first one is the study of Radhakrishnan Elayidathu about Malayala bhasha charithram the first History of Malayalam literature and the mentions of Savithri Lakshmanan about Malayalabhashacharithram in her study of early Malayalam drama. Radhakrishnan analyses Malayalabhashacharithram written by P.Govinda Pilla, the first history of literature in Malayalam published in 1881 as a source using the methodology of literary historiography. He analyses the various aspects of the text like content, structure, scholarly opinions on and against the text etc. In the second study, Savithri Lakshmanan sites the variations between the different edition

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s of MalayalabhashaCharithram. Both these studies are pointing out the scope of source study and higher criticism of ancient printed texts.

The study done by P.K. Rajasekharan and P.Venugopalan is about the famous novel written by O.Chanthu Menon . The differences between the first copy printed in 1889 and the so many later editions of that novel is astounding.

They found so many purposeful variations between the first and the later editions. The y found that he twentieth chapter is corrected in the later editions under many personal and social interests against authors interests and motives. This made them to Publish a new version of Indulekha's first edition. These relevant studies of the two most important books of Malayalam language and literature reveals the scope and essentiality of Higher criticism and source study in printed editions.

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Impact of Tolkappiam and Nannool case markers on Keralapaniniam

Dr.P. Jeyakrishnan

Tamil and Malayalam are two closely related same language family. ie Dravidian family of languages. They share many grammatical and phonological peculiarities and a large number of basic vocabulary items that can hardly be considered as borrowing. Among south Indian languages Tamil and Malayalam have more mutual intelligibility than any other languages. In Tamilnadu and Kerala there is considerable number of people living as bilinguals of Tamil and Malayalam for past several years. In this context there is more possibility to give and take ideas from one another languages.

With regard to the phonological and morphological similarities Robert Caldwell (1856) Gundart (1851-1872) A.R.Rajarajavarma (1859), Ramasamy Ayyar(1936) and many others(such as Dr.K.Nachimuthu, Dr.Venugobalapanikar, Dr.K.V.N.Namboodiri) have presented clear proofs of the close relationship between Tamil and Malayalam.

Tolkappiam; the earliest extent grammatical work in Tamil written by Tolkappiar which postulates many linguistic theories and discuss in details in the subject with five fold divisions known as

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Ezhuthu (phonology) Col (morphology) Thodar (syntax) Porul (social life) Yappu (prosody) and Ani (poetics).

Nannool thirteenth century grammatical work in Tamil ,the most important work highlighted phonology and morphology with descriptive manner after Tolkappiam.

Kerala Paniniyam is the important basic grammatical treatise of Malayalam language. Which was written by A.R.Rajarajavarma. It is widely used by prople of Kerala than any other grammatical texts. This author borrowed the ideas of Gundart's Malayalam Grammar, Leela Thilakam , Tamil grammar Tolkappiyam and Nannool in many places and also followed the footsteps of foreign scholars like Arden, Ellis Caldwell, Kittal etc. The author wrote the commentary to his work also.

This paper deals with the Case constructions in Tolkappiyam, Nannool and Kerala Paniniam and tries to give some evidences that Malayalam follows the case system of other Dravidian grammar especially Tolkappiam and Nannool

Case

Cases are the important grammatical category in all languages. Case is the suffix which is used to express the semantic relations between a noun and a verb. Here noun includes verbal nouns, verbal derivative

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nouns and participial nouns, Tolkappiar and Nannoolar uses the word ' verrumai' whereas Rajarajavarma is using the term' Vibhakthi'.

Tolkappiyar speaks about cases in the chapters named Verrumaiyiyal, Verrumai mayangiyal and Vilimarabu in collathikaram. Nannool's author Pavananthi munivar is mentioned eight cases in tamil language. Nannoolars explanation of these cases is of 12th century Tamil language Rajarajavarama describes cases in Vibhakthi prakaranam, vibhakthi Aafasa prakaranam and Karaka prakaraam in Kerala paniniyam .

The number of case

Dravidian languages are considered as Casal languages. A good portion of the semantic relations between a noun and the verb in a sentence are expressed by various case markers.

The Tamil Grammars describing cases as seven in number by including the vocative case the total number would be eight.

" Verrumai taamee eelena moliba "(Tol.546)

"vilikolvatan kann viliyodu ette"(Tol.547)

Peyare I al cu in atu kan

Vili yenrarku mavatrin peyarmurai

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In this sutra Nannoolar is saying the names and order of the eight cases in Tamil language. He clearly points out the names of eight cases and their order.

1.Peyar, 2 I, 3.All, 4.Ku, 5.In, 6.Atu

7.Kan and the last and eight one is 'Vizhi

The author of Kerala paniniyam also tells as the total number of cases are seven in number, he treat the eighth Case as sambothana case, Here the quotes of S.Akasthialingam the Tamil grammarian that the total number of cases in Dravidian languages are eight

Name of cases

Tolkappiyar and Nannoolar denotes the name of each case as follows

"Avaithaam,
Peyer ai al ku
In atu kan vili ennum iirra"(Tol.548)
"Peyar ai all ku in atu kann
Vili yen rrku mavatrin peyer murai"(Nannool.293)

According to Tolkappiyar the name of the first case is peyar or Ezhuvai verrumai as eight one is vili verrumai. The others are names as second, third, fourth, fifth, sixth, seventh. These ideas have also been revealed by Nannoolar. But in Kerala paniniyam the author is

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giving unique names for each case. The first case is named as Nirtheesika (nominative) second is prathigraahika (accusative) third one is samyoojika(sociative) fourth is udheesika(dative) fifth is prayoogika(casual) sixth is sambandhika(possessive) seventh is Aathaarika(locative) and the eight is known as samboothana (vocative). This is clearly known as the following verses of Kerala paniniyam.

"Thanma nartheesika karththa
Prathigraahika karmmamee
Ootu samyoyika shakshi
Swami udheesikaakku vu
Aal prayoojikayaam heethu
Ute sambanthika swatha
Aathaari kaathi karanam
Il kal prahthyaa Mayava. (Karika- 55)

Case markers

1. Nominative case

In all Dravidian languages the Nominative case is not suffixed. It is an un inflexed noun. This is a general idea of all eminent grammarians. Tolkappiyar and Nannoolar says noun itself is the Nominative case. It has no particular marker.

eg: Murugan vanthaan

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Murugan pandhu vilaiyadukiraan

In Kerala paniniyam also the Nominative case which is Nirtheeska has no marker. The structure of the noun itself is the case marker.

eg: Murugan vannu

So, in Dravidian languages there is no case marker to denote to Nominative case.

2. Accusative case

In Tolkappiyam and Nannool the second or accusative case marker is 'ai' which denotes the object ,and 'e' is the corresponding marker denotes Kerala paniniyam.

eg: Ravi Kannanai adithaan (Tamil) Tamil-i

Ravi Kannane adichu (Malayalam) Malayalam -a

It indicates that both these markers were prevalent in that period at least in certain types of literary compositions. These were not found in spoken dialects.

Kunjan pillai comments that during fourteen century, ai was being used as the case marker for second case in the dialect of the local Kerala people(kunjan pillai.1958:1360). He further adds than ai was completely replaced by 'e' only a century after.

Nannool is saying that the meaning of this case is (creating), (destroying), (reaching), (completely rejecting), (resembling),

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(possessing) and Kerala Paniniam points that the second ai represent to object having the meaning nirvartya, vika:rya, or pra:pya. While the sanskrit gra:mamr, a:nasantan is acceptable, leelathilakam and kerala panniniam does not approve of the same structure in Malayalam. Here the accounts case meaning is more relationship with Nannool.

3. Instrumental case

In Tolkappiyam the third case is marked by 'otu'(557) Ann (592)

eg: Muruganotu vanthaan

In Nannool denotes the case markers as' al, an, otu, ootu' totally four markers. Among these 'al and an are instrumental case. sociative case its markers are odu, Oodu According to Nannoolar third case is Instrument (Karuvi) subject (Karutha) and sociative / commutative 'ie' along with something

Instrument Ilakkuvan Kathial Aruththan

Sociative Seethai Pillaikalodu Kaatukkupponal

Where as is Kerala paniniyam this case is samyoojika is marked by Ootu.

Seetha Pillaikalodu Kaatukku Poyee

In old Malayalam uTan is the Instrumental case marker and It has been originated from the verbal word 'ottuka'. It might be changed OTu in Tamil .The 'an' Sariyai ie Euphonic particle might be a additional suffix

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4. Dative case

In Tolkappiyam the fourth or dative case is 'ku'

eg: Muruganukku koduththaan

Nannool also says the fourth case is Dative case. Its marker is 'ku'. This case is having meaning as offering something, In all Dravidian and European languages the Dative case is having this meaning.

In Keralapaniniyam the Dative case marker that is the udheesika marker is 'kku' and 'u'.

eg: Kavithaikku koduththu

'Ku' is one and same in all Dravidian Languages

5. Ablative case

In Tolkappiyam the fifth or the Ablative case suffix is 'in' where as the Nannool Indicates the case marker for this category are: i. Inn ii. Il

It means moving from a place to other place that is oblation.

eg: Muruganin moothavan Muniyan

In Keralapaniniyam the Ablative prayojika case suffix is 'aal'

eg: Baggyaththaal aagrahum saadhiccu

Caldwell considered that 'aal' originated from the words such as Vaaikal etc . In Tamil 'Kaal 'denotes the different meaning. One of the meaning is Vazhi ie way .It means moving from a place to other place that is oblation.

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6. **Genitive case**

In Tolkappiyam the six case or Genitive case marker is 'atu'

eg: Saathanathu eyalbu

The six case is Kizhamai Vettumai ie Genitive case. It is showing the relative between a noun and a noun. All the other cases are showing to relation between verb and a noun.

Nannool denotes three markers Atu and Authu A as markers. In Kerala paniniyam the sixth case is sambanthika case marker is 'ute'.

eg: Janakiyude pustakam

Among the different markers found in Tamil such as UTaya, Ute, Te, uTama, , Malayalam accept marker ute.

7. **Locative case**

In Tolkappiyam and Nannool the seventh case suffix is 'kan'

eg: Malayinkan iruntha murugan

Here the meaning of the case is the place where the event is happening. In keralapaniniyam the aathaarika case or seventh case markers are 'il' and 'kal'.

eg: Meththayil kidannu, Padikkal nilkunnu. These two have inessive and adessive meanings respectively 'il' very often is used non specifically denoting general Locational meaning.

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The Malayalam marker kal is the short form of 'Kaal' which is denoted in Nannool.

8. Vocative case

In Tolkappiyam and Nannool the eight case has no particular suffix. It appears in the name which holds it.

eg: Murugaa

Kerala paniniyam agrees with Tolkappiyam while defining the eighth case marker. This sambothana case has no marker. The word itself elongates and conveys the marker. Kerala paniniyam explains that the eight case is not a case. It is just a sound:

Ramaa

Deviii

Modern grammarian are having the eight case is not a case. It is just a sound. But Sanskrit is considering this as a case.

Conclusion

Tolkappiyam is the earliest grammatical treatise in Tamil where as Nannool is the fourteenth century Tamil grammatical work. Kerala paniniyam is the important basic grammatical work of Malayalam language. Its agreeable to both Tamil and Malayalam grammarian in many places explaining the case system . while defining the fifth case suffix, the author of Kerala paniniyam differ from Tolkappiyar and Nannoolar. In

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all other cases the markers are used in same semantical aspects. Kerala paniniam has discussed with separate names for all case markers but in Tolkappiam and Nannool there is no particular name for all cases. It is confined that the similarities between the Tamil and Malayalam case systems are more, than the differences. Kunjan pillai thinks that Kerala paniniam leans on Nannool rather that Tolkappiam.

Rajarajavarma however disapproves of copying the Paniniam system of classification for describing the case system of Dravidian vernaculars. According to him the Dravidian case system is different from the Sanskrit system of declension. Hence it is clearly understand that the Malayalam follows the case system of other Dravidian grammar especially Tolkappiam and Nannool.

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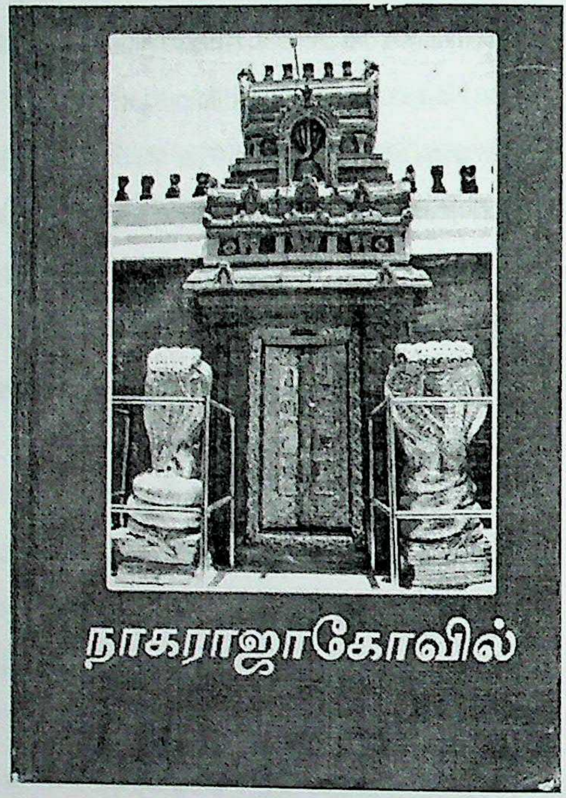
Inscriptions In Nagaraja Temple

Dr.B.Rajesh



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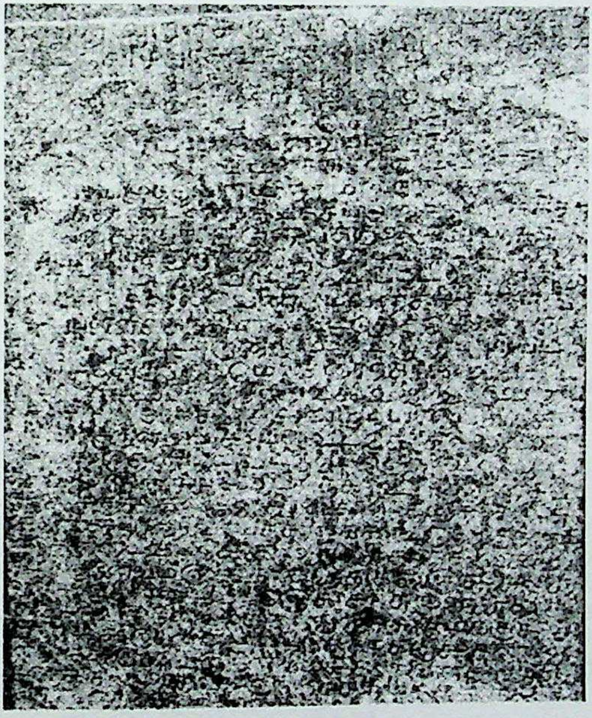
Introduction:

Researches on puthaiporukal, literature, inscriptions, plates,coins, foreign notes, art galleries, docume s and diaries exemplify the history of Tamilnadu. Plates are never extinguishable among the above treasure. Nagaraja temple plays a prominent role for worship in Kanyakumari district. It is really interesting to know about the researches carried out on the inscriptions in this temple . This paper presents one inscription available in this temple.



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Inscriptions:

As archeology, coins, painting, sculpture and literature explore the habits , culture , history , civilization and the traits of life in Nagaraja temple inscriptions are also really useful to identify the real world of ancient Tamilians . In general inscription does not carry imagination, fables, exclamation and the real shape. At that same time , it reveals some thing as it is . Hence , inscription in Nagaraja Temple is highly significant.

Kottar:

Inscriptions in Nagaraja temple talk about the history of Kottar. Kottar is a peculiar place for trade and business. The place is also written in the diaries of Thalani and Plaini. Kalinkathuparani literature reveals that Kulothunkacholan has conquered Kottar. Between AD.10 th and 11 th century , the first Rajarajacholan declared war against Nangilnadu (Nagercoil) and then he called Kottar with adding his own name ' Kottaranamummudicholapuram'.

King:

The inscriptions also explore the history of the king who built Nagaraja temple and the years of the construction of the temple . We can also find that Tranvancore Bhoothala veera sree veera udaya marthanda varma, ruled the entire tirunelveli district under the capital

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of kalakkadu and he became Pulimarthanda varma as he married a Known who belonged to the chola tribe. Moreover, he granted Kalakkadu to Nagaraja temple with the name 'Veeramarthandasadhurvedhi Mangalam'. Nagaraja temple was built on 11 th chithrai in the kollam year 696.

NagarajaTemple - Jainism:

It is the one of the most important information that once upon a time Jainism was also followed in Nagaraja temple. The inscriptions also speak about the two great Jainists; Gunaveerapandithan, Kamalavaganapandithan.

Land Grants:

The inscriptions in Nagaraja temple also house the information about the grant of lands. The land which was granted to the lord Shiva temple is Known as 'Devadhanam'. The land granted to Thirumal Temple is called 'Thiruvidaiyattam'. The land granted to Monastries and Mummaries is called 'Madappuram'. The land received by Brahmins is Known as 'Brahmadesam'. The land was also granted for charity, with the name 'Salapogam'. In the same way, the land which was donated to Jain and Buddha schools is 'pallisantham'.

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Symbols:

The Symbols of languages are available in the inscriptions of Nagaraja Temple . Ka - kannaru, kannaru - kilaiyaru, kooru - pakuppu, thadi - siruvayal, orumaa - 1 out of 20, aria maa - 1 out of 40, aria kaani - 1 out of 160, munthiri -1 out of 320 , kaani -1 out of 80, maakaani - 1 out of 16 , kuzhi - 12 square feet , 100 kuzhi - orumaa and 200 kuzhi - oruveli are same of the examples for the symbols which are available in the temple.

Inscriper:

It is evident from the inscriptions in Nagaraja temple that Raman raman is the incriber of the incriptions in the Temple.

Nagaraja Temple - Folk Tale:

When I visited Nagaraja temple to carry out the research on the inscriptions , I came to know about the following Folktale. Once the place of the Temple was a forest area . The people of the locale unknowingly stabbed the snake while cutting grasses for their cattle. Suddenly the snake became two pieces . During night, the snake came in the dreams of king Bhoothala veera sree veera udaya marthanda varma and complained that his people had stabbed it and so the king should build a stature for Nagaraja and worship. The next day the king was affected by leprosy . As a result the king

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built a temple for Nager and it was called Nagaraja temple. Thus, the inscriptions in Nagaraja temple play a pivotal role in depicture the background and history of Nagaraja Temple and its vicinity. It is very clear that inscriptions help every one recall the realty of the locale by means of the inscriptions inscriped in the temple in varions shapes and forms.

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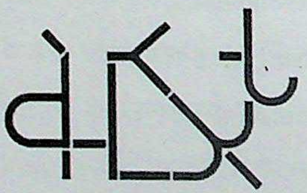
An Enigmatic Burial-Urn Lid Graffiti

Jee Francis Therattil

While I was visiting the Museum of History and Heritage [Thiruvananthapuram], today [18th May, 2013], being motivated by the International Museum Day, one particular exhibit captured my attention on the ground of the presence of an enigmatic graffiti on a burial-urn lid. I am seeing some graffiti on burial-urn lid for the first time and the enigmatic appearance evoked me to attempt to decipher the graffiti. The label shows that the provenance is Thodupuzha, Idukki Dist., Kerala.



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Being that the graffiti lacks imbalance in its style of depiction and that the graffiti is not imparting the sense of any sort of figure, I just started trying to find what the engraver was trying to convey. In the beginning it seemed to be very much puzzling for me to sort out anything out of it. Since the period of the burial-urn lid usually comes around the beginning of the Christian era, I was thinking of the possibility of the graffiti to be a calligraphy using script in Brahmi, if at all it is decipherable. Slowly I could start deciphering the script in the calligraphical graffiti.

The first one – of course from the left end seemed to be the most puzzling one. Even though we can identify the basic letter to be *cha* [d], the compound word after adding the mark for the vowel seemed to be a lot confusing. There are two clear strokes - one vertical and the other horizontal - at the right bottom of the script in addition to the one slanting at the top. We know that there is no way to pronounce *cha* with two strokes at the bottom. So I tentatively accepted the vertical stroke for decipherment and left the other one as such. Now the script becomes the compound letter *chu* [ɖ]. If we accept the stroke at the top, it becomes chea [ɗ].

The second one we could isolate is the compound letter *ru* [L]. The third one is a little bit tricky for that the scribe had rotated

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the alphabet 90° anticlockwise so as to make it touch the previous one [L] at its top. We can isolate the basic alphabet as tha [⅄]. At this point we can't be sure whether the indented letter is mere *tha* or the compound one *thae* [⅄].

The fourth one if we start now from the top, it will be *pae* [ⱶ] because of the horizontal stroke at the left side of the alphabet *pa* [Ⱶ]. The fifth one is then the one below *pae* ie. *ya* [ယ]. This one is placed at an angle of 45° anticlockwise so as to impart the whole writing the likeness of a closed figure. We can notice the presence of a stroke beneath *ya*. Here also the stroke is vertically downwards the alphabet which imparts no sense. This stroke in addition to the second one with the first alphabet may be just for ornamentation of the whole figure as a calligraphed picture.

Now the whole script becomes readable something like *chea ru tha pae y*. Chirutha1 is a blessing in Prakrit [*mangalam*] and *paey* is 'ghost'. So altogether we can consider this calligraphy [*chirutha paey*] represents the 'blessing to the soul' of the diseased person whose mortal remains are placed inside the burial-urn for which this stone slab serves as the lid. The additional strokes and the arrangement of the letters forcibly making it touch each other so as to

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appear as a single figure imparts the whole calligraphy an enigmatic appearance, may be as a part of ritual in Tantric Buddhism.

The letters are arranged from left to right [ ], then one on top of the other [ ], and finally to the bottom of previous one [ ]. The last letter is further linked to two of the letters to its left [ ]. We can see Brahmi script in Malayaman coins where the letters are seen scattered all over the flan of the coin. The intention was to arrange the letters on the flan without affecting the maximum possible size of the main figure [horse]. But in the case of this burial-urn lid, unlike scattering the letters, intention was to link the letters so as to impart a tantric appearance. This style of inscription is reported for the first time.

Notes & References:

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Historicity of Kolaswaroopam: A new outlook

Dr. Manjusha.R.Varma,

The history of Kerala, especially of North Malabar, will be incomplete without discussing the position of Kolathiris in the political formation of Kolathunadu. The history of Kolaswaroopam is generally an unknown area of research among historians and students of history. Yet, no significant historical researches have been done on this topic. The history of Kolathiris even now resting upon the unexplored manuscripts and inscriptions, most of them have in scattered or brittle form. Many historians referred only small particles of the history of Kolaswaroopam. In this context the present author aims to trace some significant role of Kolathiris in the history of Kolathunad and their origin and evolution through the past. The present paper is more based on sources like some inscriptions, manuscripts, travelogues and folklore tradition like thottampattu and other secondary sources.

The twelfth sarga of Mushikavamsakavya clearly mention about the origin of a new dynastic order on the basis of matrilineal system from Validhara[1]. He came to power followed by his uncle Palaka I. We could get a clear picture of the age of Validhara from

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Narayan Kannur inscription, which belonged to the early part of the tenth century[2]. During this time he was the Ilamkoyil or junior prince of Kolathunad. The use of the term Ilamkoyil, the corrupted form of Ilamkoor in this inscription indicates the beginning of the system of Kuruvazhcha in the early part of the tenth century along with the matrilineal system of succession. Another notable thing related to the origin of Kolathiris is that both the Mushikas and the Kolathiris received the title 'Ramaghata Mushika' along with their name. For instance rulers came after Srikanta (the last ruler mentioned by Atula) also received the title 'Ramakata Mushika'. The Srikanta, identified as Kandakarivarman of Eramam inscription, ruled Kolathunad in the eleventh century[3]. He was followed by Nagaswamy Udaya Varman. His name is recorded in Kuruvakkavu temple inscription[4]. Mushikavamsha does not contain the name of this Udaya Varman, on the basis of the character of Vattezhuthu, some epigraphist observed that the period of this inscription is tenth century[5]. The inscription indicates that he was an independent ruler and there were many deshavzhis under his suzerainty[6]. Quite naturally one question may arise that then why Mushikvamsakavya, a historical work avoided the exploits of such a prominent ruler like Nagaswamy Udaya Varman? Because the period of Udaya Varman came after Srikanta.

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His period of administration came after Srikanta, in eleventh century or just after that. He was the only one ruler outside the chapters of Mushikavamsa with traditional title 'Ramakata Mushika'. That system continued even after Nagaswamy Udaya Varman and may be in later period also. Gradually the later rulers avoided the traditional title 'Ramakata Mushika' or 'Ramakata Muvar'. All these things shows continuity of Kolathiris from the Mushikas.

A small region like Ezhimala and its suburban areas under the Mushika rulers expanded and developed under the Kolathiris after tenth century. The state formation of Kolathunadu was a long process. Kolathunadu at the zenith of its power extended up to Nethravathy River in the North and Korappuzha in the South, Coorg in the East and Arabian Sea in the West. The administration of the Kolathiris continued up to 1792[7]. Migration of some branches of Kolathiris to Travancore along with many other people during the time of Tipu's invasion further extended their historical connection[8]. The historical part of the Sanskrit poem Mushikavamsakavya reveals the exploits of Kolathiris from Validhara to Srikanda. A few inscriptions from Kolathunadu contain the name of some of these rulers.

The social structure and the production and distribution systems of Kolathunadu were not favourable for a Brahmin settlement.

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In the case of Kolathunadu the geographical position was more suitable for the cultivation of commercial crops like pepper, cardamom, etc. these items were highly important in international trade markets. Therefore in Kolathunadu Brahmin settlements were less in number. They selected places suitable for traditional paddy cultivation. Kolathunadu had only two Brahmin settlements Perumchellur and Payyannur. Kolathiri needed consent of the Perumchellur Brahmin sabha in all important matters. When Kolathiri promoted the commercial class for the well-being of the nation, the conventional perumchellur Brahmin sabha showed unwillingness to perform even the Shodasha Samskaras of Kolathiri family and refrain from the duties of chief priesthood. The Perumchellur Brahmin Sabha isolated even Karumarathu Illam for agreeing to perform the duties of chief priests by neglecting order of Brahmin Sabha of Perumchellur. Karumarathu Illam was one of the pathillam or ten houses of Brahmins who alternatively performed the duty of chief priesthood of Kolaswaroopam. So kolathiri was compelled to bring Brahmins from Karnataka and settled them in Kolathunadu. That came to be known as Brahmaprathishta. Therefore it can be said that the state formation of Kolathunadu was completed without the blessings of the Brahmins. This was against the general political trend in Kerala.

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The advent of religions like Jainism, trade guilds, the Arabs and the European merchants contributed to the development of a state system in Kolathunadu. Jainism had major role in the development of Kolathunadu than Buddhism. The present district of Wayanad, a part of former Kolathunadu, was a major Jaina centre[9]. Wayanad was also a part of Kolathunadu. The remains of Jaina Viharas in Vennyodu, Palakunnu, Puthangadi, and many other places in Wayanad are good specimens of presence of Jainism in early Kolathunadu[10]. In the hinterlands of Kolathunadu they engaged in cultivation and trade of commercial crops like pepper, cardamom, etc. These products had high value in international trade markets. These trade activities of the people belonged to Jainism was one of the factors that contributed to the development of Kolathunadu in the early medieval period. A vattezhuthu inscription discovered from the vinicnity of a Jaina Basti at Talakavu village of south Wayanad indicates the establishment of a Nakaram or trading centre in the ninth century A.D. by a particular trading class called Valanvhiyar who believed to Jainism. The Valanchiyar were a prominent trade group in south India, particularly in Kolathunadu. The Eramam inscription also points out role of Valanjiyar in Kolathunadu. The Thiruvattur inscription from Kolathunadu is also come under the

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category of Jaina inscriptions. Except certain references in Mushikavamsakavya we have not much evidence about the role of Buddhism in Kolathunadu. In fact we cannot deny the role of Jainism in the development of Kolathunadu.

The merchant community made remarkable contribution to the development of Kolathunadu in thirteen and fourteen centuries. Kolathiris changed their capital for the convenience of administration and to get direct access to Sea. They shifted centre of administration from Ezhimala to Madayi and later to Valarpattanam. Ezhimala was their first capital. Vakaiperumthurai was another name of Ezhimala (The term Vakai is the Tamil name of Vaka, Perumthura means large port. So we discern the meaning of this Tamil term as larger port with full of Vaka trees). The term itself indicates Ezhimala was a large port. A number of Roman coins have been unearthed from the foothills of Ezhimala in Cannanore. This shows brisk trade activities that were going on in the Ezhimala region with the Roman empire. Later progress of the Madayi port closed the chapter of Ezhi[11]. The settlement of the Arabs, Jews and many other trading groups around Madayi made this place a prominent port-city. Madayi's more accessibility to the sea persuaded Kolathiri to transfer his capital from Ezhimala to Madayi. Madayi was under the direct control of the junior prince or Ilamkur[12].

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Valarpattanam was the last capital of the Kolathiris. Silting in Madayi river blocked its access to sea that caused shifting of many Arab and Muslim traders from Madayi to Valarpattanam. It was very difficult to control and supervise the trade and commerce far from Valarpattanam. Therefore, Valabhan Kolathiri built a fort at Valarpattanam[13].

The shipbuilding industry was also in a flourishing condition. From the very ancient time onwards ship building industry was popular in Kolathunadu[14]. In Marakkalam pattu, there is fine description about the character of native ship building technology and industry[15]. Native people used slaked lime for painting the body of ships and they drew pictures by using natural colours of indigo, alum and red arsenic[16]. Thottam pattu is another source of information regarding the early inland trade contacts of Kalathunadu. In Kathuvnur Veeran Thottam, there is fine description about permanent trade routes towards Kudaku via Kurumathur, Chuzhali, Srikantapuram, Vannayikadavu, Idumba Kadavu and Vellakulam[17]. At that time Kudaku was a prominent trade centre and people from Kolathunadu engaged in trade and agricultural activities in Kudaku[18]. Thus suitable geographical position and dynamism of merchant class provided favourable atmosphere for the rise of Kolathunadu as a richest state in thirteenth and fourteenth centuries.

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The Arabs became principal trades and often tried to act as intermediaries in the commercial venture of Kolathunadu. They settled down in Kolathunadu and many other parts of Malabar long before the advent of Islam. Even from the pre-Islamic period the Arabs had close commercial and cultural contacts with Kolathunadu. After the birth of Islam the Arabs tried to influence the native inhabitants. The religious toleration of the Kolathiri helped them to propagate new religious ideas in Kolathunadu. It remoulded the political culture of Kolathunadu as a composite and cosmopolitan one. The friendship of these two regions widened scope of future commercial developments of Kolathunadu. The native traders also made extensive voyages to Arabia for the purpose of trade. The Arabs shipped cargoes from Malabar to Yemen and then to Syria and from there to the markets of Egypt and Europe[19]. The European countries like Portugal got information about the products of Malabar from the Arabs. Thus the Arabs acted as intermediaries between the Indo-Arab region and Mediterranean region.

The Indian Ocean region was basically a peaceful zone of trade. On the other hand the Mediterranean region had always witnessed an intense intra-regional rivalry for the control of trade and territory. They used gun for attacking the enemy ships and

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captured cargoes from the ships of other countries. The Arabs, who traded with the Mediterranean world, were aware of the use of guns. But they used it only for the protection of their vessels and trading zone. This was followed by a strong struggle between the European and Arab merchants. The Arabs has knowledge of the direction of winds and ocean currents[20]. But they used their scientific observation for the purpose of peaceful trade activities. Though the Arabs were more advanced in mathematics and astronomy, the Mediterrnean traders were fast in learning. The latter's increasing contacts with the Arab world enriched their knowledge on wind directions, use of mariners compass, etc[21]. When the Portuguese sailed for India, they inherited these commercial and navel traditions of the Mediterranean traders. The idea of freedom of trade and exchange of culture in the Indian Ocean Zone was interrupted by the advent of the Portuguese. In fact the Portuguese trade contact with Indian Ocean region was the result of prolonged trade and cultural contacts and encounters between the Mediterranean world and the Arab world.

The interference of the Portuguese in the affairs of Indian Ocean region opened a period of rivalry in eastern trade. The continuous trade contacts of Portuguese lowered the price of Eastern commodities in the international markets and created a spirit of distant

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navigation and commerce among the other Europeans like the Dutch, the French and the English. Among them, the English were succeeded to establish their supremacy in the East particularly in Kolathunadu. Kolathiri offered all necessary arrangements for the English pepper trade in Kolathunadu. In a letter to the English dated 12th April 1628, Kolathiri expressed his desire to invite English to Kolathunadu[22]. Kolathunadu provided two strategically important centres to the English-Tellicherry and Dharmadam. Tellicherry was the nearest place on the coast from Wayanad. The place in between Periya pass and Wayanad produced the finest Cardamom in the world. Besides, the countries of Kottayam and Randuttara, the neighbouring regions of Tellicherry, were the best pepper producing areas of north Malabar. In the seventeenth century Local Muslim traders from other parts of Kolathunadu were migrated to Tellicherry for the purpose of trade[23]. This shows the importance of that place during the English period. Besides, at that time Tellicherry was not under the direct control of Kolathiri. Thus English were more attracted to strategically and commercially important place like Tellicherry. In fact due to the advent of the European companies Kolathunadu faced more political convulsions and experienced colonial system. Further the trade contacts with European companies that at first enriched the state

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treasury and played a leading part in the political system of Kolathunadu, later acted as causative factor for the downfall of the same state and ruler.

Like all other medieval principalities in Kerala the political system of Kolathunadu was feudal in character with its peculiar system of Kooruvazhcha. We got first written evidence about the system of Kooruvazhcha from Narayan Kannur temple inscription[24]. It mentions about an Ilamkoyil Validhara. Ilamkoyil or Ilamkur had special rights in administration, especially in trade activities. The economic development of Kolathunadu in the thirteenth and fourteenth centuries was the result of diplomacy of Ilamkurs of Kolathunadu. In the early medieval period there was only one Ilamkoor or regent. Later, the expansion of the country increased responsibilities of the regent so the division of power among the four regents in the family according to their seniority in hieranrchiacal order came into existence. They were Thekkilamkoor, Vadakkilamkoor, Nalamkoor and Anjamkoor. The first two regents had special position in administration. All chieftains of Kolathunadu came under the direct control of these representatives of the King. The political advantage of this division of power was that it curtailed autocracy of the king from the family circle itself. Furthermore, by this system Kolathiri could control the chieftains of

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southern and northern parts with the help of his first two regents Thekkilamkur and Vadakkilamkur.

Kolathiri consulted important matters with the representatives of all community. The nattukoottam or public meetings were held at Madayikavu in the presence of Kolathiri for taking decisions in all important political and social issues[25]. The surrounding places of Madayikavu temple was a main centre of Slave trade[26]. It was conducted under the direct supervision of the king. Before the transaction of a slave the king should get the consent of the particular community head to which the slave belonged[27]. The buyer should remit one part of amount the temple deity and another part to the state treasury.

The Mysorean attacks on Kolathunadu caused the end of the dynastic rule in Kolathunadu. It expelled most of the other branches of the Kolaswaroopam from Kolathunadu. Haider Ali seized the fort at Madayi and evacuated all the people from the fort. During this time Ali Raja, the High Admiral of Haider Ali in Kolathunadu captured the palace of the Kolathiri at Chirakkal. When Tipu Sultan attacked Kolathunadu he brutally killed one prince of Chirakkal[28]. His campaign became of aggressive that the royal family members took asylum in Travancore. The migrants lost even their traditional properties and their rights to temples in Kolathunadu. Thus the invasion ended with

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complete dispersal of the royal family of Kolaswaroopam[29]. The Travancore ruler Dharma Raja provided necessary facilities to the migrated princes and princesses[30]. They settled around the Central Travancore area[31].

Since the dawn of sixteenth century Kolathiri had lost his paramount power. The absence of a paramount power and presence of internal quarrels in the family circle of Kolathiri caused the development of a quasi-feudal political system in Kolathunadu in early modern period. During this time the prince regents Thekkilamkur and Vadakkilamkur were unable to control the chieftains of their respective regions. So the scattered chieftains of the country were able to establish their own political order in the areas that came under their administrative purview. Like the governmental authority these chieftains started to secure their income from their own private domains, estate properties and poll tax and professional taxes from their subjects. Moreover, royalties on certain spices of high quality like pepper and cardamom that were grown in their region, the vessels and ships stranded on the Coast were other sources of income of these chieftains[32]. This system continued up to the Mysore invasion in Kolathunadu. After the Mysore invasion these landholders were compelled to pay the revenue or surrender their lands.

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Kolathiri also promoted indigenous folk art like theyyam. It was a peculiar folk art form of Kolathunadu. Traditionally the people belonged to the communities of Vannan, Malayan, Panan, Mavilan, Cheravan, Chingathan, Tuluvelan, Koppalan, Anjuttan Munnuttan, Pulayan and Perumannan communities had traditional right to perform theyyam. Among them the Chingathans were the tax collectors of Kolathiri in Ezhimala later Kolathiri gave them right to perform theyyam[33]. In fact theyyam earned respect and reputation to downtrodden classes of Kilathunadu. Besides, theyyam personify the deceased heroes and heroines of all class and religion. The theyyam artists performed even Mappila kolams and the people showed great respect to them. The goddess of Madayikavu is considered as the Theyyaparudevatha. A particular practice called Sthanamkodukkal is still continuing in Kannur at Chirakkal Kovilagam. It is a continuation of granting of honour or position to an artist on particular occasion by the Kolathiri.

The temples and palaces of Kolaswaroopam are good in their architectural style. The beauticul carvingsat Pazhaya Kovilaka, remnants of forts at Valarpattanam and Madayi, temples at Cherukunnu, Kadalayi, Madayi, Kalarivathukkal, the well structured man made pond at Chirakkal, etc. are good specimens of architectural

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contributions of Kolathiris and they acted as the messengers of past glory of Kolathunadu and its administrators.

It is also important to note that the Kolathiris followed a policy of religious toleration and cultural accommodation. The Jews, Muslims, Jains, Buddhists, Brahmins, Christians and others had full freedom to practice their own faith and engage in their own professions in Kolathunadu. The king maintained cordial relations with all religious and cultural groups in the kingdom. Kolathiri did not make any special favour to any particular community and his conflict with Perumchellur Brahmins illustrate that he was not submissive to Brahmanical hegemony.

In short, liberal and cordial relations with peoples of different castes and religious led to the formation of a multifaceted cultural life in Kolathunadu. Thottam pattu, vadakkan pattu, marakkalam pattu, etc. shed light on the political, social, cultural and commercial developments of Kolathunadu. This shows religious harmony and cultural co-existence of the people of Kolathunadu. In general, peaceful co-existence of different communities and their culture indicate that the state formation of Kolathunadu under Kolathiris and attained commendable maturity in terms of creating a sophisticated political space. Considering these qualities of Kolathunadu, it may not be unjustifiable to say that the Kolaswaroopam polity under the Kolathiris

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can be called the precursor of a modern secular liberal state, where freedom of expression, faith and culture has been safeguarded.

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Laghubhaskariyam and the King Ravi Varma Deva

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The discovery of Laghubhaskariyam written by Sankaranarayana is considered as the most important landmark in the reconstruction of the history of II Chera Empire as it helps to identify the regnal years of the king Sthanu Ravi. But in a detailed examination it would be clear that the ruler who is mentioned in the work is not Sthanu Ravi but another ruler named Ravi varma Kulasekhara.

The Vazhappalli inscription[1] issued by Rajasekhara is considered to be the first available inscription of a Chera King. But there is controversy over the name of the ruler and the date on which the inscription was issued. While Elamkulam Kunjan Pillai argues that it was issued by a Rajasekhara or Cheraman Perumal Nayanar[2], M.G.S. Narayanan gives him the name Rama Rajasekhara[3]. The inscription was issued in the 12th regnal year of the ruler. As per the calculations of Elamkulam Kunjan Pillai, it was issued in 832 AD. M.G.S. Narayanan says that as the first ruler Rama Rajasekhara started his rule in 800 AD, the 12th regnal year is 812 AD. Thus historians are having divergent views regarding fixation of the exact date of Vazhappalli inscription.

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Much before that scholars were not able to determine the exact date of coronation of Sthanu Ravi. With the help of Tillaistanam inscription[4], scholars came to the conclusion that the king Sthanu Ravi ruled over Kerala in the ending decades of 9th century AD. The appearance of Sthanu Ravi along with Aditya Chola I in the inscription was a strong evidence to fix the date of Sthanu Ravi as Aditya chola's regnal years began from 870.

M.G.S. Narayanan does not consider the Tillaisthanam record for identifying Aditya Chola I. He states that the Tillaisthanam record was not issued during the reign of Aditya Chola, but it was issued during the reign of Sri Kanda[5]. Tondainatu Pavina Cholan Palayanai Ko Kandan alias Rajakesari was a Potapi Chola ruler called Srikanda Chola who ruled from 817 AD and 845 AD. As the coronation of Stanu Ravi was in 844 AD, the joint action of both the rulers was placed in 844-45 AD. So, MGS Narayanan claims that Sthanu Ravi did not continue up to 885 AD. As per his view Sthanu Ravi continued up to 883 AD[6]. There is no evidence to prove that SriKanda accepted the title 'Rajakesari' and his authority over Tondai Nadu as an independent ruler is not generally accepted by the scholars.

Though historians got various inscriptions of Sthanu Ravi from Kerala, all these lack the exact date of his coronation, just mentioning

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the regnal years of the monarch. Among them the most important inscription is Tarisappalli inscription[7] which was issued during the 5th regnal year of the king Sthanu Ravi. By issuing this copper plate certain rights and privileges were given to a church at Terisappalli. As the church is no longer in existence, it is impossible to find out its location. The Venad ruler Ayyan Adikal Thiruvadikal issued this inscription[8]. The other important personality who was there during the time of issue of the copper plates was Vijayaragadevar, the then Koyiladhikarikal.

The Tirunandikkara inscription gives more details regarding Vijayaragadevar[9]. From the details given by the inscription it can be inferred that Vijayaragadevar was the son-in–law of Sthanu Ravi, because his wife Kizhanadikal was the daughter of Sthanu Ravi. The Tiruvottiyur inscription[10] of Paranthaka Chola also helped the historians to fix the date of Sthanu Ravi to the closing decades of 9th century AD.

The historians were not sure about the exact date of coronation of Sthanu Ravi. Thus the emergence of the so called Second Chera Empire and the chronology of the rulers were under suspicion. It was the interpretation of Laghubhaskariyam by Elamkulam Kunjan Pillai that ended the controversy of the regnal years of Sthanu Ravi. With the help of that work he was able to calculate the exact date of

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the ruler's coronation. It also gave a strong foundation for the reconstruction of the chronology of Second Chera rulers. Thus the argument of the emergence and the existence of Kulasekhara Empire got more acceptance.

It is generally believed that, finding of Laghubhaskariyam ended the controversy of Sthanu Ravi's date of coronation. But from a logical investigation of the work, it can be inferred that the king who is mentioned in the work is another king named Ravi Varma. In the work the word Sthanu appears in the first stanza.

Vyaptam moorthibhirashtabhir jagadidam
yasyakhilam drishyathe
Srashta rajasabhagavasthithividhow
sathwasrithah shangaghdruk
Samhare thamasayutho hara ithi
proktho ya ekasthridha
Sthanurjayathi thrirupasahitho
linghgepi lokarchithah[11]

The word 'sthanu' in 'sthanurjayathi' was interpreted as the name of the king Sthanu Ravi. (In fact, the ruler is mentioned in the inscriptions as Thanu Iravi). A careful inspection into the work proves the fact that the author of the work (Sankaranarayanan) was praising

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the god 'Lord Siva'. If the work is about the king Sthanu Ravi, his name should have appeared again in the work with his original nameRavi Varma. Also, the word 'sthanu' is not appeared again in the work.

Elamkulam Kunjan Pillai argues that the name Sthanu is an epithet of Ravi Varma[12]. He does not explain how he got such an epithet. Instead of explain that question he used that word as an evidence to prove his argument that the king who is mentioned in the work is Sthanu Ravi. There are available inscriptions bearing the name Ko Thanu Iravi or King Sthanu Ravi. In all the inscriptions he is described as Thanu Iravi. So it can be inferred that Sthanu is a part of his original name and it does not represent any epithets of that king.

From the stanza given below, it can be inferred that the name of the ruler was Ravi Varma Deva or Ravi Varma.

Golanmahodayapure ravivarmadeva
Sambandhiyanthravalayankitharasichakrath
Bhanoh kuleeradasabhagagathe thulanthyam
Lagnam maya vidhithamasu vadehakalam[13]

Again the ruler Ravi Varma is described as Nrupendra[14], Bharata[15], Avaniravih[16], etc. in the various places. But Ravi Varma is never mentioned as Sthanu Ravi in the work. The stanza also furnishes

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some information regarding the observatory at Mahodayapuram. As the king was very much interested in astronomy, he might have contributed some machinery to the observatory.

Sriravivarmadevakadachid graham

yudhavijnanaprakatanarthamaha[17]

The above line is another example to confirm the name of the ruler as Ravi Varma and not Sthanu Ravi. It can be understood that the king had completed his 25 regnal years in 869 AD from the stanza given below.

Chapapravishta gurusouri samatvakalam

Yamyotharam gamanamandharathah pramanam

Achakshwa sarvamavagamya bhatoktaha marga-

Dhithyukthavan ravivishesha nripabhivandyah

Thadhapanchavimsathi varshanyatheethani devasya[18]

It can be noted that here the name of the king is mentioned as Ravi. The king has completed 25 years in 869 AD. The date can be calculated with the position of Jupiter and Saturn in the house of Sagittarius. Jupiter takes 12 years to orbit the Sun. Saturn takes 30 years to do it. Thus these two planets come together in a house once in 60 years. In the 1st century of Kollam era it happened only in 869 AD. So it can be concluded that the king named Ravi has completed 25 regnal years in 869 AD. Thus he ascended to the throne in 844 AD[19].

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Surapati dishidrushtam golayantra dwilagnam

Khanapatalanirudhe bhaskare simharashou

Gathavathi dashabhagamshchaparashyardhayatham

Vadha chadithi ravesthwam nithyakarmokthakalam[20]

The king showed very much interest in astronomy and astrology. Probably, he patronized the author of this work Sankaranarayanan in his court. An observatory was there in the city of Mahodayapuram. There were large buildings in Mahodayapuram[21]. Ravi Varma instructed the expert craftmen and astronomers to construct an assembly hall[22].

Puthrah sri ravivarmadevanrupather

deepthamshoovamshodhithah

Prasadedhikruthe mahodayapure

thathrapi sensmukhe

Bheryam vimsathi thadithasu khadika

suvirbavuvatha kim

Lagnam meshadashamshake savitharee

prachyam dishi kshmapathe[23]

Special arrangements were taken to announce the exact time for the public. There were soldiers who were instructed to announce the time by beating the drum.

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Uktham keralavamsakethuravina

madhyahnashankuprabha

Deshesmin kiyatheethi rasishu gathe

bhanow kriyadyadishu

Prathyekam vigannayya valsaragatham

chayapramanam kramath

Prathyaksham hi dinadwayena ganitham

pathre likhithwanaya[24]

The above stanza says that the dynasty of Ravi Varma is Kerala Vamsa and he is very expert at astrology.

From these arguments certain facts can be inferred. There was a king named Ravi Varma Deva who ruled over Kerala in the 9th Century AD. The exact year of his coronation was in 844 AD. The king was very much interested in astronomy and astrology. Mahodayapuram was an important city with mansions. There was an observatory in Mahodayapuram. The most important fact is that the king who is mentioned in the work was not Sthanu Ravi but, Ravi Varma Deva.

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Endnotes

1. T.A.S., no.2, Pp. 8-14
2. Elamkulam Kunjan Pillai, Studies in Kerala History, Trivandrum,1970, P. 221
3. M.G.S.Narayanan, Perumals of Kerala, Thrissur, Cosmo Books, 2013, P. 64
4. T.A.S., II, no.9 (II a), Pp.76-77
5. M.G.S.Narayanan, Op. Cit., P. 65
6. Ibid.
7. T.A.S., II, no.9(1), Pp. 62-70
8. Ibid.
9. T.A.S., IV, no.36, Pp. 144-5
10. No.169 of 1912,S.I.I., III, no.103, Pp. 235-6
11. Laghubhaskariya of Bhaskara, Trivandrum, Kerala University Manuscript Libraray, 1949, P. 1
12. Elamkulam Kujan Pillai, Elamkulam Kunjanpillaiyude Therenjedutha Krithikal Part-I (Mal.),Thiruvananthapuram, International Center for Kerala Studies,2005, pp. 407-8
13. Laghubhaskariya of Bhaskara, Op. Cit., P. 43
14. Laghubhaskariya of Bhaskara, Op. Cit., P. 48
15. Laghubhaskariya of Bhaskara, Op. Cit., P. 65

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16. Laghubhaskariya of Bhaskara, Op. Cit., P. 82

17. Laghubhaskariya of Bhaskara, Op. Cit., P. 37

18. Laghubhaskariya of Bhaskara, Op. Cit., P. 87

19. Elamkulam Kunjan Pillai, Studies in Kerala History, Trivandrum, 1970, P. 223

20. Laghubhaskariya of Bhaskara, Op. Cit., P. 43

21. Laghubhaskariya of Bhaskara, Op. Cit., P. 42

22. Laghubhaskariya of Bhaskara, Op. Cit., P. 44

23. Laghubhaskariya of Bhaskara, Op. Cit., P. 42

24. Laghubhaskariya of Bhaskara, Op. Cit., P. 40

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